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NOTICE OF ALLOWANCE AND FEE(S) DUE

32864	7590	05/17/2010

FISH & RICHARDSON, P.C.
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER
MANSFIELD, THOMAS L

ART UNIT	PAPER NUMBER
3624	

DATE MAILED: 05/17/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,561	07/29/2003	Karsten Schulz	13909-026003 / 2002P00222	4018

TITLE OF INVENTION: TRANSFORMATIONS BETWEEN COMBINED AND INDIVIDUAL WORKFLOWS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$0	$0	$1510	08/17/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,561	07/29/2003	Karsten Schulz	13909-026003 / 2002P00222	4018

TITLE OF INVENTION: TRANSFORMATIONS BETWEEN COMBINED AND INDIVIDUAL WORKFLOWS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$0	$0	$1510	08/17/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
MANSFIELD, THOMAS L	3624	705-009000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)
☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.
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PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.   OMB 0651-0033   U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,561	07/29/2003	Karsten Schulz	13909-026003 / 2002P00222	4018

32864 7590 05/17/2010	EXAMINER
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3624	

MINNEAPOLIS, MN 55440-1022

DATE MAILED: 05/17/2010

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1075 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1075 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/628,561	SCHULZ ET AL.
	Examiner	**Art Unit**
	THOMAS MANSFIELD	3624	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address*--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to <u>amendments filed 26 January 2010 and interview on 19 January 2010</u>.

2. ☒ The allowed claim(s) is/are <u>1-14,16,18-22,37 and 38</u>.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

       3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

   Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
   THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

       1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.

   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
       Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____.

/Thomas Mansfield/ Examiner, Art Unit 3624	/Beth V. Boswell/ Supervisory Patent Examiner, Art Unit 3623

<div align="center">**DETAILED ACTION**</div>

This Office Action is in response to the Applicants amendment filed 26 January 2010 and an interview with the Applicants' Representative, Ryan McCarthy on 19 January 2010. Claims 1, 37, and 38 are amended herein, Claims 20 and 40 are cancelled, and Claims 1-14, 16, 18-22, 37, and 38 are currently pending and allowed below. A Terminal Disclaimer has been approved.

<div align="center">**EXAMINER'S AMENDMENT**</div>

1. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this Examiner's amendment was given in a telephone interview with Applicants' Representative, Ryan McCarthy on 19 January 2010. However, as of 10 May 2010, the submission of this Examiner's Amendment has included a new amendment to independent Claims 1 and 37. Since the specification in the instant application has been amended to include statutory subject matter, the Examiner additionally includes the limitation, "non-transitory" for additional statutory support for the computer-readable storage medium recited in independent Claims 1 and 37.

The application has been amended as follows:

In the Claim(s):

1. (Currently amended) A method of building a combined workflow comprising:

storing a first private workflow and a second private workflow in a non-transitory computer-readable storage medium coupled to one or more computer processors and having instructions tangibly stored thereon which, when executed by the one or more computer processors, cause the one or more computer processors to perform operations, the first private workflow being associated with only a first party and including a confidential first plurality of actual tasks, and the second private workflow being associated with only a second party and including a confidential second plurality of actual tasks;

accessing the first and second private workflows from the computer-readable storage medium;

accepting the first private workflow into a first tier of a multi-tiered workflow mode representing the first private

workflow as a first matrix in which the first plurality of tasks are each represented as first vertices;

accepting the second private workflow into the first tier of the multi-tiered workflow mode;

representing the second private workflow as a second matrix in which each of the second plurality of tasks are

represented as second vertices;

abstracting, by the one or more computer processors, the first private workflow and the second private workflow in a

second tier of the multi-tiered model to provide respective first and second abstracted, non-confidential views of the

first and second private workflows to the second party and the first party, respectively, the first abstracted view

including a first plurality of groupings of the first plurality of tasks, and the second abstracted view including a second

plurality of groupings of the second plurality of tasks;

defining first state dependencies between the first plurality of actual tasks of the first private workflow and the first

abstracted view, and second state dependencies between the second plurality of actual tasks of the second private

workflow and the second abstracted view, the first and second state dependencies assuring that the respective first

and second abstracted views accurately represent states of the corresponding first and second pluralities of actual

tasks;

defining control flow dependencies between the first abstracted view and the second abstracted view, the first and

second control flow dependencies expressing interaction of the first and second private workflows;

ordering the first plurality of groupings and the second plurality of groupings from the first and second, different

private workflows into a single combined workflow in a third tier of the multi-tiered workflow model, the combined

workflow being shared by the first party and the second party and having a task order that, when executed, provides

a desired result of a business collaboration between the first party and the second party;

adding ordering tasks to the combined workflow, the ordering tasks being operable to implement the order of the

combined workflow and thereby achieve the desired result; and

logging interactions between the first party and the second party during execution of the combined workflow,

wherein abstracting the first private workflow and the second private workflow further comprises:

receiving a first user input selecting one of the first plurality of actual tasks that the user intends to be maintained as

confidential,

when the selected actual task comprises a type SPLIT task, traversing the first workflow in two directions to find two

type JOIN tasks, one task in each direction,

when the selected actual task comprises a type ACTIVITY task, traversing the first workflow in two directions to find

two adjacent tasks, one task in each direction,

when the selected actual task comprises neither a type SPLIT task or a type ACTIVITY task, traversing the first

workflow in a first to direction to find a type JOIN task, and traversing the first workflow from the type JOIN task in a

second direction to find a type SPLIT task,

identifying a respective path from the selected actual task to each of the type JOIN tasks, to each of the adjacent

tasks, or to the type JOIN task and the type SPLIT task,

providing one or more of the paths as possible user selections, receiving a second user input selecting one of the

paths, the selected path including at least the selected one of the first plurality of actual tasks, and abstracting the

selected path in the first workflow view.

2. (Original) The method of claim 1 wherein adding ordering tasks comprises forming a

sequential flow which interleaves implementation of the first plurality of tasks and the second plurality of tasks.

3. (Original) The method of claim 1 wherein adding ordering tasks comprises forming a

parallel flow of a first task within the first plurality of tasks and a second task within the second plurality of tasks.

4. (Original) The method of claim 1 wherein adding ordering tasks comprises adding at

least one of conjunctive splitting and joining tasks which specify the task order.

5. (Original) The method of claim 1 wherein adding ordering tasks comprises adding at

least one of alternative splitting and joining tasks which specify the task order.

6. (Previously Presented) The method of claim 1 wherein adding ordering tasks comprises

adding a first splitting task which designates that a first task within the first private workflow is followed by a first

following task and a second following task.

7. (Previously Presented) The method of claim 6 wherein adding ordering tasks comprises

adding the first following task as a second task within the second private workflow.

8. (Previously Presented) The method of claim 6 wherein adding ordering tasks comprises

adding the first following task as a first joining task, the first joining task designating a second task within the second

private workflow as following the first joining task and the first splitting task.

9. (Previously Presented) The method of claim 8 wherein adding ordering tasks comprises

adding a second splitting task following the second task within the second private workflow, the second splitting task

designating that the second task is followed by a third following task and a fourth following task.

10. (Previously Presented) The method of claim 9 wherein adding ordering tasks comprises adding the third

following task as the second following task, the second following task being a second joining task within the first

private workflow that designates that a third task within the first private workflow follows the second following task.

11. (Previously Presented) The method of claim 10 wherein adding ordering tasks comprises adding the fourth

following task as a third joining task within the second private workflow, the third joining task designating that a fourth

task within the second private workflow follows the third joining task and the third task within the first private workflow.

12. (Previously Presented) The method of claim 11 wherein a second ordering task is a joining task which

designates a fourth task within the second private workflow, the fourth task following the second task within the

combined workflow.

13. (Previously Presented) The method of claim 9 wherein adding ordering tasks comprises:

adding a third task within the first private workflow as the second following task;

adding a second joining task within the first private workflow as the third following task,

the second joining task designating that a fourth task within the first private workflow follows the third following task.

14. (Previously Presented) The method of claim 1 wherein ordering the first plurality of tasks comprises inputting the

task order from an operator.

15. (Cancelled)

16. (Previously Presented) The method of claim 1 wherein adding ordering tasks comprises:

inserting the first matrix and the second matrix into a third matrix;

modifying a selected value within the third matrix, thereby reflecting a construction or

removal of a selected dependency between two vertices within the first plurality of tasks, consistent with the task

order;

adding a fourth vertex before a first of the two vertices, the fourth vertex having a first chosen value reflecting a first

new dependency between the fourth vertex and the first of the two vertices; and

adding a fifth vertex after the first of the two vertices, the fifth vertex having a second chosen value reflecting a

second new dependency between the fifth vertex and the first of the two vertices.

17. (Cancelled)

18. (Original) The method of claim 1 further comprising selecting a subset of the combined workflow for execution by

the first party.

19. (Original) The method of claim 18 wherein selecting a subset comprises determining that the subset includes a

third plurality of tasks, each consecutive pair of the third plurality of tasks connected by a dependency.

20. (Original) The method of claim 18 wherein selecting a subset comprises determining that a last task within the

third plurality of tasks precedes at most one subsequent task within the combined workflow.

21. (Original) The method of claim 20 wherein selecting a subset further comprises determining that no internal task

within the third plurality of tasks, exclusive of the last task, immediately precedes an external task that is not included

within the third plurality of tasks.

22. (Original) The method of claim 20 wherein selecting a subset further comprises determining that no internal task

within the third plurality of tasks, exclusive of a first task of the third plurality of tasks, immediately succeeds an

external task that is not included within the third plurality of tasks.

23. - 36. (Cancelled)

37. (Currently Amended) A non-transitory computer-readable medium tangibly encoded with a computer program comprising instructions that, when executed, operate to cause [[a]] one or more computer processors to perform operations comprising:

accepting a first private workflow into a first tier of a multi-tiered workflow model, the first private workflow comprising a confidential first plurality of actual tasks implemented by a first party;

representing the first private workflow as a first matrix in which the first plurality of actual tasks are each represented as first vertices;

accepting a different, second private workflow into the first tier of the multi-tiered workflow model, the second private workflow comprising a confidential second plurality of actual tasks implemented by a second party;

representing the second private workflow as a second matrix in which each of the second plurality of actual tasks are represented as second vertices;

abstracting the first workflow and the second private workflow in a second tier of the multi-tiered model to provide respective first and second abstracted, non-confidential views of the first and second private workflows to the second party and the first party, respectively, the first abstracted view including a first plurality of groupings of the first plurality of actual tasks, and the second abstracted view including a second plurality of groupings of the second plurality of actual tasks;

defining first state dependencies between the first plurality of actual tasks of the first private workflow and the first abstracted view, and second state dependencies between the second plurality of actual tasks of the second private workflow and the second abstracted view, the first and second state dependencies assuring that the respective first and second abstracted views accurately represent states of the corresponding first and second pluralities of actual tasks;

defining control flow dependencies between the first abstracted view and the second abstracted view, the first and second control flow dependencies expressing interaction of the first and second private workflows;

ordering the first plurality of groupings and the second plurality of groupings from the first and second, different private workflows into a single combined workflow in a third tier of the multi-tiered workflow model, the combined workflow being shared by the first party and the second party and having a task order that, when executed, provides a desired result of a business collaboration between the first party and the second party;

and adding ordering tasks to the combined workflow, the ordering tasks being operable to implement the order of the

combined workflow and thereby achieve the ~~desired~~ result,

wherein abstracting the first private workflow and the second private workflow further comprises:

receiving a first user input selecting one of the first plurality of actual tasks that the user intends to be maintained as

confidential,

when the selected actual task comprises a type SPLIT task, traversing the first workflow in two directions to find two

type JOIN tasks, one task in each direction,

when the selected actual task comprises a type ACTIVITY task, traversing the first workflow in two directions to find

two adjacent tasks, one task in each direction,

when the selected actual task comprises neither a type SPLIT task or a type ACTIVITY task, traversing the first

workflow in a first to direction to find a type JOIN task, and traversing the first workflow from the type JOIN task in a

second direction to find a type SPLIT task,

identifying a respective path from the selected actual task to each of the type JOIN tasks, to each of the adjacent

tasks, or to the type JOIN task and the type SPLIT task,

providing one or more of the paths as possible user selections, receiving a second user input selecting one of the

paths, the selected path including at least the selected one of the first plurality of actual tasks, and abstracting the

selected path in the first workflow view.

38. (Currently Amended) A system comprising:

one or more computer processors ~~computers~~; and

a non-transitory computer-readable medium coupled to the one or more computer processors and

~~computers~~ having instructions tangibly stored thereon which, when executed by the one or more computer

processors ~~computers~~, cause the one or more computer processors ~~computers~~ to perform operations comprising:

accepting a first private workflow into a first tier of a multi-tiered workflow model, the first private workflow comprising

a confidential first plurality of actual tasks implemented by a first party,

representing the first private workflow as a first matrix in which the first plurality of actual tasks are each represented

as first vertices,

accepting a different, second private workflow into the first tier of the multi-tiered workflow model, the second private

workflow comprising a confidential second plurality of actual tasks implemented by a second party,

representing the second private workflow as a second matrix in which each of the second plurality of actual tasks are

represented as second vertices,

abstracting the first workflow and the second private workflow in a second tier of the multi-tiered model to provide

respective first and second abstracted, non-confidential views of the first and second private workflows to the second

party and the first party, respectively, the first abstracted view including a first plurality of groupings of the first plurality

of actual tasks, and the second abstracted view including a second plurality of groupings of the second plurality of

actual tasks,

defining first state dependencies between the first plurality of actual tasks of the first private workflow and the first

abstracted view, and second state dependencies between the second plurality of actual tasks of the second private

workflow and the second abstracted view, the first and second state dependencies assuring that the respective first

and second abstracted views accurately represent states of the corresponding first and second pluralities of actual

tasks;

defining control flow dependencies between the first abstracted view and the second abstracted view, the first and

second control flow dependencies expressing interaction of the first and second private workflows;

ordering the first plurality of groupings and the second plurality of groupings from the first and second, different

private workflows into a single combined workflow in a third tier of the multi-tiered workflow model, the combined

workflow being shared by the first party and the second party and having a task order that, when executed, provides

a desired result of a business collaboration between the first party and the second party, and

adding ordering tasks to the combined workflow, the ordering tasks being operable to implement the order of the

combined workflow and thereby achieve the ~~desired result~~.

wherein abstracting the first private workflow and the second private workflow further comprises:

receiving a first user input selecting one of the first plurality of actual tasks that the user intends to be maintained as

confidential,

when the selected actual task comprises a type SPLIT task, traversing the first workflow in two directions to find two

type JOIN tasks, one task in each direction,

when the selected actual task comprises a type ACTIVITY task, traversing the first workflow in two directions to find

two adjacent tasks, one task in each direction,

when the selected actual task comprises neither a type SPLIT task or a type ACTIVITY task, traversing the first

workflow in a first to direction to find a type JOIN task, and traversing the first workflow from the type JOIN task in a

second direction to find a type SPLIT task,

identifying a respective path from the selected actual task to each of the type JOIN tasks, to each of the adjacent

tasks, or to the type JOIN task and the type SPLIT task,

providing one or more of the paths as possible user selections, receiving a second user input selecting one of the

paths, the selected path including at least the selected one of the first plurality of actual tasks, and abstracting the

selected path in the first workflow view.

2.   The following is an examiner's statement of reasons for allowance:

         The present invention is directed to a method, system, and computer-readable medium of building

a combined workflow. The closest prior art, Schulz et al. (Schulz), "Architecting Cross-Organisational B2B

Interactions", IEEE, 2000 in view of Shen et al. (Shen), "Coordinating Interorganizational Workflows Based

on Process-Views", Springer-Verlag Berlin Heidelberg, 2001 fail to teach either singularly or in combination

a method, system, and computer-readable medium of building a combined workflow. The analogous art of

Schulz is directed to achieving workflow interoperability in multi-organizational workflow management. The

analogous art of Shen is directed to a modeling tool to describe interorganizational workflows. Although

Schulz and Shen generally teach workflow systems, Schulz in view of Shen fail to teach either singularly or

in combination a method, system, and computer-readable medium for:

         A method, system, and computer-readable medium of building a combined workflow comprising:

storing a first private workflow and a second private workflow in a computer-readable

storage medium coupled to one or more computer processors and having instructions tangibly stored

thereon which, when executed by the one or more computer processors, cause the one or more computer

processors to perform operations, the first private workflow being associated with only a first party and

including a confidential first plurality of actual tasks, and the second private workflow being associated with

only a second party and including a confidential second plurality of actual tasks;

accessing the first and second private workflows from the computer-readable storage medium;

accepting the first private workflow into a first tier of a multi-tiered workflow mode representing the first

private workflow as a first matrix in which the first plurality of tasks are each represented as first vertices;

accepting the second private workflow into the first tier of the multi-tiered workflow

mode;

representing the second private workflow as a second matrix in which each of the second plurality of tasks

are represented as second vertices;

abstracting, by the one or more computer processors, the first private workflow and the second private

workflow in a second tier of the multi-tiered model to provide respective first and second abstracted, non-

confidential views of the first and second private workflows to the second party and the first party,

respectively, the first abstracted view including a first plurality of groupings of the first plurality of tasks, and

the second abstracted view including a second plurality of groupings of the second plurality of tasks;

defining first state dependencies between the first plurality of actual tasks of the first private workflow and

the first abstracted view, and second state dependencies between the second plurality of actual tasks of the

second private workflow and the second abstracted view, the first and second state dependencies assuring

that the respective first and second abstracted views accurately represent states of the corresponding first

and second pluralities of actual tasks;

defining control flow dependencies between the first abstracted view and the second abstracted view, the

first and second control flow dependencies expressing interaction of the first and second private workflows;

ordering the first plurality of groupings and the second plurality of groupings from the first and second,

different private workflows into a single combined workflow in a third tier of the multi-tiered workflow model,

the combined workflow being shared by the first party and the second party and having a task order that,

when executed, provides a result of a business collaboration between the first party and the second party;

adding ordering tasks to the combined workflow, the ordering tasks being operable to implement the order of

the combined workflow and thereby achieve the ~~desired~~ result; and

logging interactions between the first party and the second party during execution of the combined workflow,

wherein abstracting the first private workflow and the second private workflow further comprises:

receiving a first user input selecting one of the first plurality of actual tasks that the user intends to be

maintained as confidential,

when the selected actual task comprises a type SPLIT task, traversing the first workflow in two directions to

find two type JOIN tasks, one task in each direction,

when the selected actual task comprises a type ACTIVITY task, traversing the first workflow in two directions

to find two adjacent tasks, one task in each direction,

when the selected actual task comprises neither a type SPLIT task or a type ACTIVITY task, traversing the

first workflow in a first to direction to find a type JOIN task, and traversing the first workflow from the type

JOIN task in a second direction to find a type SPLIT task,

identifying a respective path from the selected actual task to each of the type JOIN tasks, to each of the

adjacent tasks, or to the type JOIN task and the type SPLIT task,

providing one or more of the paths as possible user selections, receiving a second user input selecting one

of the paths, the selected path including at least the selected one of the first plurality of actual tasks, and

abstracting the selected path in the first workflow view, as recited in independent Claims 1, 37, and 38.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue

fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should

be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS MANSFIELD whose telephone number is (571)270-1904. The examiner can normally be reached on Monday-Thursday 8:30 am-6 pm, alt. Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boswell Beth can be reached on 571-272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. M./
Examiner, Art Unit 3624

4 May 2010
Thomas Mansfield

/Beth V. Boswell/

Supervisory Patent Examiner, Art Unit 3623